

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 10.12.2018

Version number 4

Revision: 10.12.2018

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** Urea
- **Article number:** 24524
- **CAS Number:**  
57-13-6
- **EC number:**  
200-315-5
- **Registration number** 01-2119463277-33
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **1.4 Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The substance is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**  
57-13-6 urea
- **Identification number(s):**
- **EC number:** 200-315-5
- **Description:**
- **Empirical formula:**  $C H_4 N_2 O$
- **MW:** 60.1

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### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**  
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
- **After swallowing**  
Wash out mouth. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be formed, but not limited to:  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide and carbon dioxide  
Ammonia (NH<sub>3</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store at dry places in tightly closed receptacles.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**  
This product is hygroscopic.  
Protect from humidity and water.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **DNELs**  
workers: short-term - / long-term - exposure, systemic effects, dermal: 580 mg/ kg bw  
workers: short-term - / long-term - exposure, systemic effects, inhalative: 292 mg/ m<sup>3</sup>
- **PNECs** PNEC fresh water: 0,047 mg/l
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and feed.  
Store protective clothing separately.  
Immediately remove all soiled and contaminated clothing  
Avoid contact with the eyes and skin.  
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Chloroprene rubber, CR
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Crystalline
Colour:	White
Odour:	Ammonia-like
- **pH-value:** <10

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- |   |   |
|---|---|
| <b>· Change in condition</b>                          |   |
| Melting point/freezing point:                         | 132-135 (decomp) °C                           |
| Initial boiling point and boiling range: undetermined |   |
| · Flash point:  | Not applicable                                |
| · Flammability (solid, gaseous)                       | Product is not flammable.                     |
| · Decomposition temperature:                          | > 134 °C                                      |
| · Explosive properties:                               | Product does not present an explosion hazard. |
| · Vapour pressure:                                    | Not applicable.                               |
| · Density at 20 °C:                                   | 1.32 g/cm <sup>3</sup>                        |
| · Bulk density:                                       | ca. 720 kg/m <sup>3</sup>                     |
| · Solubility in / Miscibility with Water at 20 °C:    | ca. 1000 g/l                                  |
| · Partition coefficient: n-octanol/water:             | -1.56 log POW (calc.)                         |
| · 9.2 Other information                               | No further relevant information available.    |

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Reacts with oxidizing agents  
Reacts with nitrate and nitrite
- **10.4 Conditions to avoid** high temperatures
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In case of fire: See Section 5

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### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

<b>· LD/LC50 values that are relevant for classification:</b>		
Oral	LD50	14300 mg/kg (rat)
	LC50/96h	> 6810 mg/l (Forelle)

- |      |          |                       |
|------|----------|-----------------------|
| Oral | LD50     | 14300 mg/kg (rat)     |
|      | LC50/96h | > 6810 mg/l (Forelle) |
- **Primary irritant effect:**
  - **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
  - **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** Based on available data, the classification criteria are not met.
  - **STOT-single exposure** Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
  - **Aspiration hazard** Based on available data, the classification criteria are not met.

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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Toxicity to algae - EC50/192h (*Scenedesmus quadricauda*): > 10000 mg/l
- **12.2 Persistence and degradability** the product is readily biodegradable.
- **12.3 Bioaccumulative potential** No relevant bioaccumulation is expected because of log Pow = -1,56.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** EC50 / 24 h (*Daphnia magna*): > 10 000 mg / l
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### SECTION 14: Transport information

- |  |  |
|--|--|
| · <b>14.1 UN-Number</b>  | Void   |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.2 UN proper shipping name</b>  | Void   |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.3 Transport hazard class(es)</b>   |  |
| · <b>ADR, IMDG, IATA</b>   |  |
| · <b>Class</b>   | Void   |
| · <b>Label</b>   | -  |
| · <b>ADN/R Class:</b>  | Void   |
| · <b>14.4 Packing group</b>  |  |
| · <b>ADR, IMDG, IATA</b>   | Void   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable.                                      |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable.                                      |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |

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- |                                 |      |
|---------------------------------|------|
| <b>· ADR</b>                    |      |
| <b>· Transport category</b>     | -    |
| <b>· UN "Model Regulation":</b> | Void |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - PBT: persistent, bioaccumulative, toxic substance (REACH)
  - vPvB: very persistent, very bioaccumulative substance (REACH)
  - REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - bw: body weight
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - DNEL: Derived No-Effect Level (REACH)
  - PNEC: Predicted No-Effect Concentration (REACH)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
- **\* Data compared to the previous version altered.**

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